

AMERICAN ELECTRONICS ASSOCIATION

15-SEP-06

**Information Dominance:
The Future of LandWarNet**

Mr. Vernon Bettencourt

Deputy, Chief Information Officer/G-6

CALL TO DUTY: BOOTS ON THE GROUND





A "Business Profile" of the Army



People

- Active Military 502.4K
- Reserve Military 555.0K
- Civilians 240.2K
- Contracted Svcs ~ 220.0K } 460K
- Total ~ 1,517K

- 250,000 Soldiers deployed/forward stationed
 - Iraq ~ 105K – Kuwait ~ 12K
 - Afghanistan ~ 18K – Korea ~ 22K
 - Homeland Defense ~ 13K

Plant/Equipment

- Fleet
 - Wheels ~237,000 vehicles
 - Tracks ~ 28,000 vehicles
 - Rotary wing ~ 4,200 airframes
- Installations
 - ~4,100 Installations and Centers
 - ~\$241B Plant Replacement Value
 - ~15.4M Acres
 - ~57,700 Miles of Roads
 - ~981 Million Square Feet of Buildings

Financials

- FY 04 Expenditures \$ 141.6B
- FY 05 Base (\$101.9B) + Supp (\$58.4B) \$ 160.3B
- FY06 Appropriation (Base)
 - Military Personnel \$ 30.6B
 - Operations & Maintenance \$ 23.7B
 - Procurement \$ 11.0B
 - RDTE \$ 11.0B
 - Military Construction \$ 1.7B
 - Environmental Restoration \$.4B
 - Army Family Housing \$ 1.3B
 - Reserve Components \$ 16.9B
 - National Guard \$11.0B
 - Army Reserve \$ 5.9B
- Chem/Demil (OSD) \$ 1.4B
- Bridge Supplemental \$ 98.2B
- Supplemental Request \$ 32.1B
- Total FY 06 \$ 36.6B
- (Appn + B-Supp + Request) \$ 166.9 B*

*Includes IED Defeat (\$490M OMA; \$1,111M OPA; \$358M RDTE)

The Army, as a corporation, would rank #5 on the Fortune 500 based on revenue with as large a workforce as Wal-Mart and McDonalds (1.5M).



CIO/G-6 Mission



As the Army Chief Information Officer (CIO), report directly to the Secretary of the Army for setting the strategic direction, objectives, and supervising all Army C4 and information technology functions.

(Title 10 U.S.C. Sec. 3014(c)(1)(D)).



- Responsible to manage and oversee the Army-wide implementation of Clinger Cohen Act mandated functions and policies to comply with public laws, Office of Management and Budget, Department of Defense, and Department of the Army guidance.



As the Army G-6, support the Army Chief of Staff and Army Staff in performing information management, network operations (including computer network defense), force structure, and the equipping and employment of signal forces.



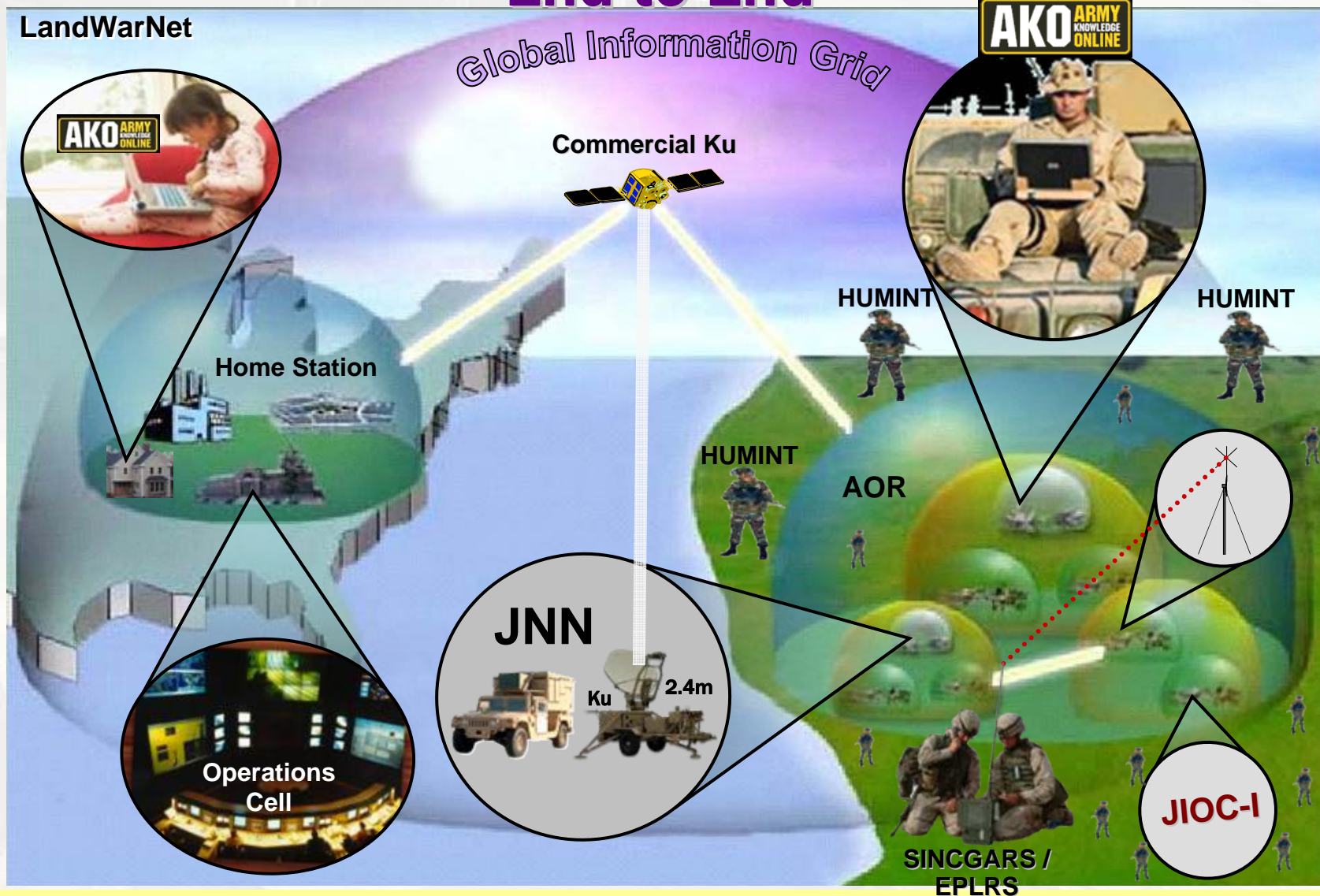
Force Multiplier





Why are we here?

End to End



...connecting the Warfighter no matter where in the Battlespace



500-Day Plan Goals



- ✓ **Develop and maintain** a secure, seamless, interdependent LandWarNet Network



- ✓ **Lead enterprise integration** to achieve decision superiority by transforming processes, applications and data into network-centric capabilities across the Army

- ✓ **Protect and defend** the Army's systems, networks, and information



- ✓ **Ensure Army information management** and information technology investments maximize Joint and Army capabilities

- ✓ **Develop the Army's information technology** and information management knowledge and skills to support mission needs



- ✓ **Deliver an integrated enterprise strategy** that influences Joint and Army use of information management and information technology in furthering the warfighting capabilities.





JNN in Action



JNN Katrina



Tactical Satellite Communications

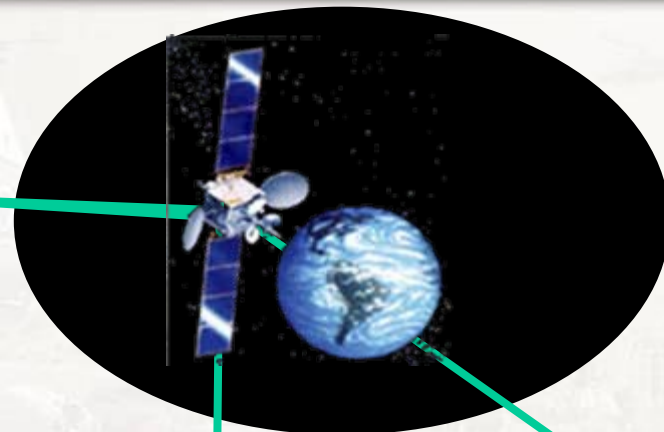


What a single hub can do



Sanctuary

119 Mbps



**"7 Mbps"
(FDMA)**



**119 Mbps
aggregate**

**"4 Mbps"
(TDMA)**



**60
Battalions**



**14 Brigade
Combat
Teams**

- Additional capacity
- Modems/Hubs temporarily installed at Teleports/STEP sites

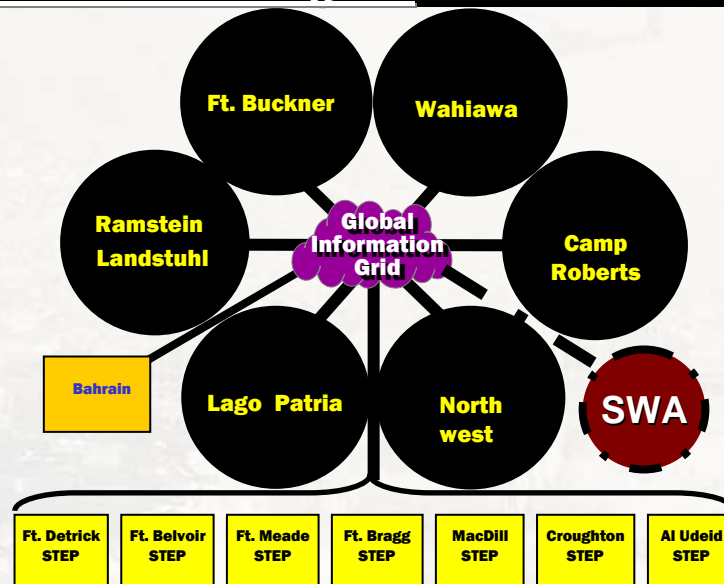
**Increased
SATCOM density
from Division to
Battalion**



Teleport "In Context"



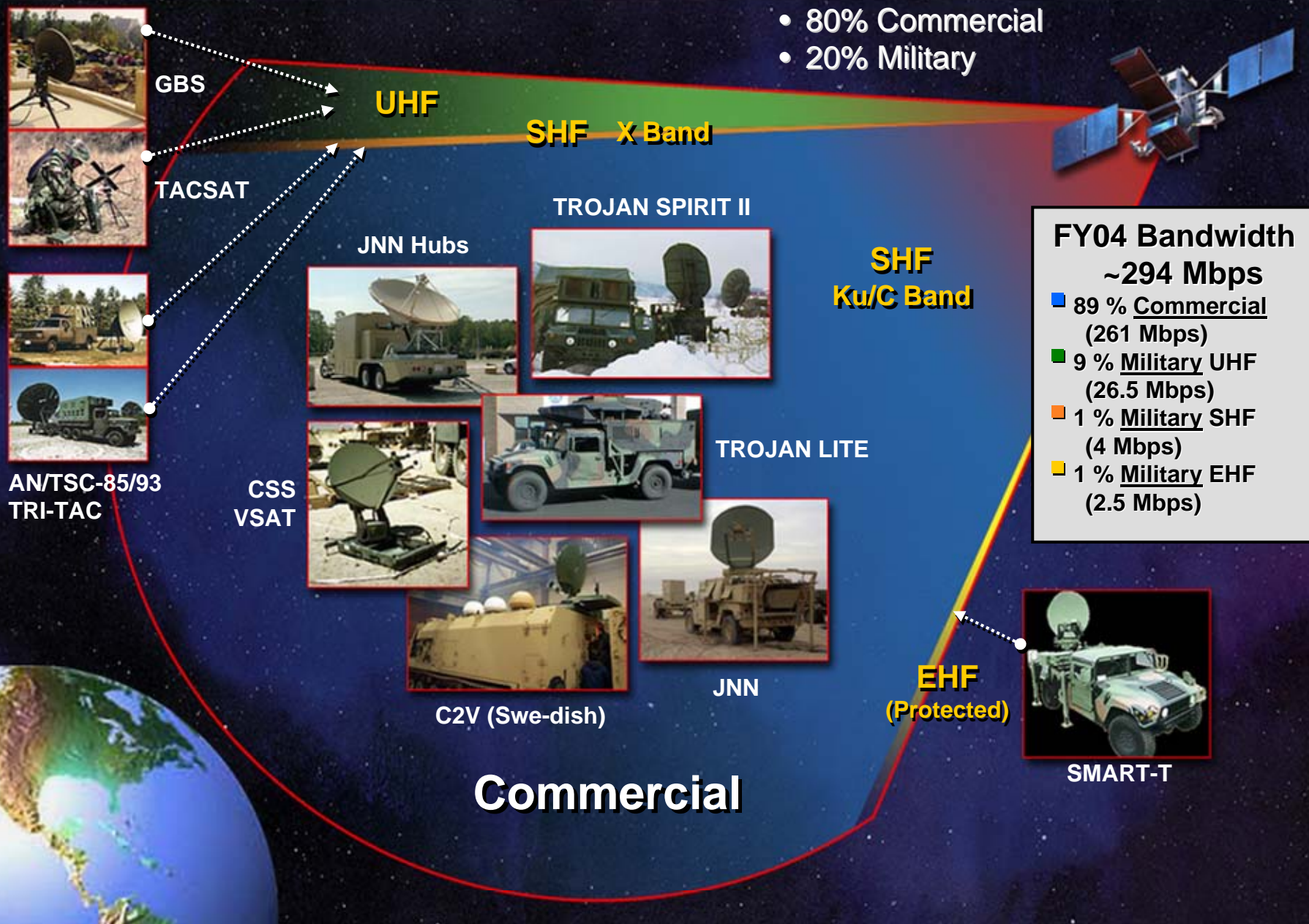
Provide Seamless Communications Support to the Warfighter



- ☒ **Generation I (FY 02-07)**
- ☐ **Generation II (FY 04-08)**
 - ...Initial IP capability
- ☐ **Generation III (FY 08-12)**
 - ...Full IP Capability
- ☐ **Potential Generation IV (FY 13-out)**
 - ...Implement TSAT



Brigade Combat Team In The Fight - Today





Brigade Combat Team In The Fight - 2014



- 20% Commercial
- 80% Military

BFT/
FBCB2



Commercial
(Ku/C/L Bands)



WIN-T



TSAT
(AEHF/Ka Band)



WGS
(SHF-X/Ka Band)

FCS
Family



CSS VSAT



JNN



Phoenix

AEHF
(EHF Protected)



JNN Hubs

MUOS
(UHF)

GBS



SMART-T



TACSAT

FY14 Bandwidth
~1 Gbps

- 20 % Commercial (200 Mbps)
- 25.5 % Military TSAT (255 Mbps)
- 50 % Military WGS (500 Mbps)
- 4 % Military AEHF (40 Mbps)
- .5 % Military MUOS (UHF) (5 Mbps)



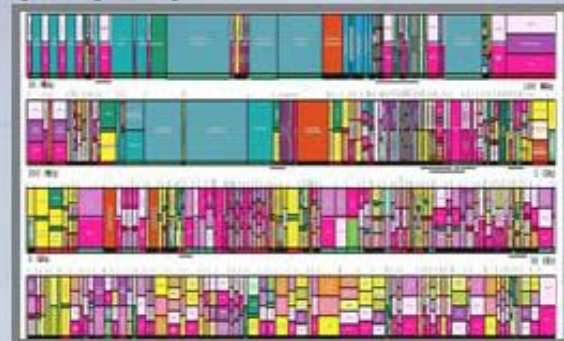
The issue with the first tactical mile



The Spectrum World is facing more challenges than ever before

Spectrum Way Ahead

- Spearhead new Spectrum MOS
- Leverage new tools to enable Spectrum managers to detect and remedy Interference
- New techniques and focus for Spectrum to better support the fight



If you design Emitters.... We need YOU to:

- Design more spectrum-efficient systems
- Design systems that can operate in an intense radio frequency environment
- Work with your Government sponsors to work with Army Spectrum Management Office at the beginning of the process

Spectrum
must be part
of the
architecture
effort



Modernizing our Installations



I3MP...

➤ **Extends the Global Information Grid onto Posts, Camps and Stations**

➤ **Provides**

- 1. Secure and Non-Secure Voice**
- 2. Classified & unclassified Installation Transport Network to:**
 - **Battalion and company level**
 - **Motorpools, logistics point, ranges, etc.**
- 3. Network Security architecture**
- 4. E-mail and storage servers**

Started in FY 2005

- ♦ Fort Stewart & HAAF, GA
- ♦ Fort Benning & DTA, GA
- ♦ Fort Campbell, KY
- ♦ Fort Hood, TX
- ♦ Fort Drum, NY
- ♦ Fort Carson & PC, CO
- ♦ Fort Lewis & YFC, WA
- ♦ Fort Bliss, TX
- ♦ Fort Riley, KS
- ♦ Fort Bragg, NC
- ♦ Fort Irwin & NTC, CA
- ♦ Fort Polk, LA
- ♦ Camp Ederle (Vicenza)
- ♦ Grafenwöhr East Camp
- ♦ Grafenwöhr Training Area
- ♦ Camp Walker
- ♦ Patch Barracks
- ♦ Schofield Barracks & WAAF, HI
- ♦ Fort Richardson/Wainwright, AK
- ♦ Yongsan Garrison
- ♦ Camp Humphreys
- ♦ Camp Zama

In FY 2006

- ♦ Fort Carson & PC, CO
- ♦ Fort Lewis & YFC, WA
- ♦ Fort Indian Town Gap, PA (ARNG SBCT)
- ♦ Fort Bliss, TX
- ♦ Fort Riley, KS
- ♦ Wiesbaden Area
- ♦ Augsburg Area
- ♦ Kosovo (Villaggio Italia)
- ♦ Dal Molin
- ♦ Europe—Short Haul Tie Cabling
- ♦ Stuttgart—Inside Building Wiring
- ♦ Wiesbaden & Grafenwöhr—DISN-E Sites
- ♦ Europe—CAN Optical Switching & IA
- ♦ Korea—K-16 Site
- ♦ Hawaii—Pohakuloa Training Area
- ♦ Hawaii—Schofield Enclave
- ♦ Japan—Yokohama

Yellow and underline denotes start of future scope.



I3MP - Installation Information Infrastructure Modernisation Program



Modernizing our Installations



I3MP...

- Extends Information Camps and
- Provides
 - 1. Secure
 - 2. Classified Installations to:
 - Batt
 - Moto
 - rang
 - 3. Network
 - 4. E-mail

Primes for the new contract (Infrastructure Modernization (IMOD))

- A T & T Government Solutions
- Avaya, Inc.
- Bechtel National, Inc
- Engineering & Professional Services, Inc. (EPS)
- Federal Network Systems, LLC (a Verizon Company)
- General Dynamics Network Systems, In.
- Lucent Technologies
- NextiraOne Federal, LLC (Black Box)
- Science Applications International Corporation (SAIC)
- Siemens Government Services, Inc.

ARNG SBCT

bling
Wiring
—DISN-E Sites
ching & IA

g Area

of future scope.



Secure and Reliable Identification

HSPD-12

White House
President George W. Bush

For Immediate Release
Office of the Press Secretary
August 27, 2005

Homeland Security Presidential Directive/HSPD-12

Subject: Policy for a Common Identification Standard for Federal Employees and Contractors

(1) While variations in the quality and security of forms of identification used to gain access to secure Federal and other facilities where there is a credible terrorist attack need to be eliminated. Therefore, it is the policy of the United States to enhance security, increase Government efficiency, reduce identity fraud, and protect personal privacy by establishing a mandatory, Government-wide standard for secure and reliable forms of identification issued by the Federal Government to its employees and contractors (including contractor employees).

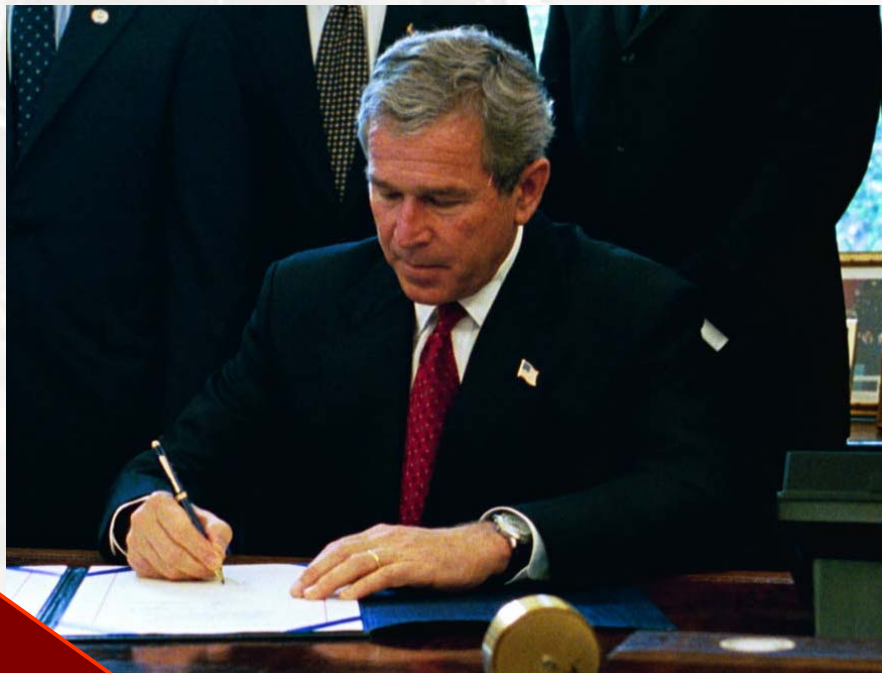
(2) To implement the policy set forth in paragraph (1), the Secretary of Commerce shall promulgate in accordance with applicable law a Federal standard for secure and reliable forms of identification the "Standard" not later than 12 months after the date of this directive in consultation with the Secretary of State, the Secretary of Defense, the Attorney General, the Secretary of Homeland Security, the Director of the Office of Management and Budget (OMB), and the Director of the Office of Science and Technology Policy. The Secretary of Commerce shall periodically review the Standard and update the Standard as appropriate in consultation with the affected agencies.

(3) "Secure and reliable forms of identification" for purposes of this directive means identification that (a) is issued based on sound criteria for verifying an individual employee's identity; (b) is strongly resistant to identity fraud, tampering, counterfeiting, and terrorist exploitation; (c) can be easily authenticated electronically; and (d) is issued only by providers whose reliability has been established by an official accreditation process. The Standard shall include guidelines for the use of the Standard to ensure flexibility in selecting the appropriate level of security for each application. The Standard shall not apply to identification associated with national security systems as defined by 44 U.S.C. 3542(a)(2).

(4) Not later than 4 months following promulgation of the Standard, the heads of executive departments and agencies shall have a program in place to ensure that identification issued by their departments and agencies to Federal employees and contractors meets the Standard. As promptly as possible, but in no case later than 12 months after the date of promulgation of the Standard, the heads of executive departments and agencies shall, to the maximum extent practicable, require the use of identification by Federal employees and contractors that meets the Standard in gaining physical access to Federally controlled facilities and logical access to Federally controlled information systems. Departments and agencies shall implement this directive in accordance with ongoing Government-wide activities, policies and guidance issued by OMB.

(5) Not later than 12 months following promulgation of the Standard, the heads of executive departments and agencies shall have a program in place to ensure that identification issued by their departments and agencies to Federal employees and contractors meets the Standard. As promptly as possible, but in no case later than 12 months after the date of promulgation of the Standard, the heads of executive departments and agencies shall, to the maximum extent practicable, require the use of identification by Federal employees and contractors that meets the Standard in gaining physical access to Federally controlled facilities and logical access to Federally controlled information systems. Departments and agencies shall implement this directive in accordance with ongoing Government-wide activities, policies and guidance issued by OMB.

**DoD is
executing
NOW!!!**



FIPS Pub 201

FIPS PUB 201

FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATION

Personal Identity Verification (PIV) of Federal Employees and Contractors

Computer Security Division
Information Technology Laboratory
National Institute of Standards and Technology
Gaithersburg, MD 20899-5000

February 21, 2005



U.S. Department of Commerce
Bureau of Economic Analysis

Department of Homeland Security
Policy and Planning Division
Homeland Security Division
Department of Justice, along with others

**Industry
Partners
need to be
on-board!!**

- “Secure and reliable forms of identification”
- Required to gain physical access to Federally controlled facilities and networks

- Standard for one federal identity card
- Tokens - “something you know” (PIN) + “something you have” (the card)



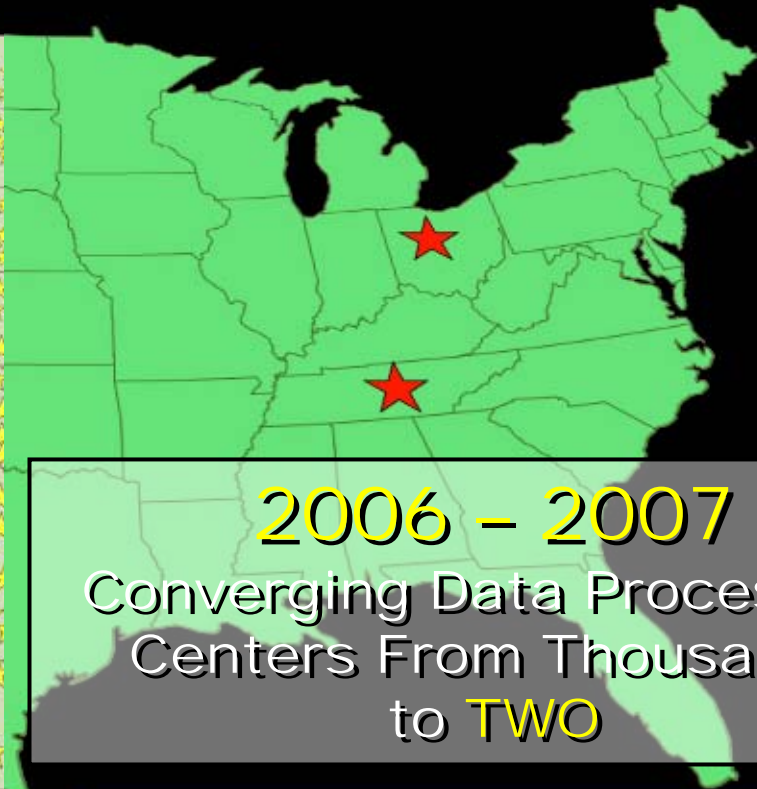
Consolidating Data Bases



**2583 Army National Guard Armories.
88 Air National Guard Flying Bases.**



Consolidating Data Bases

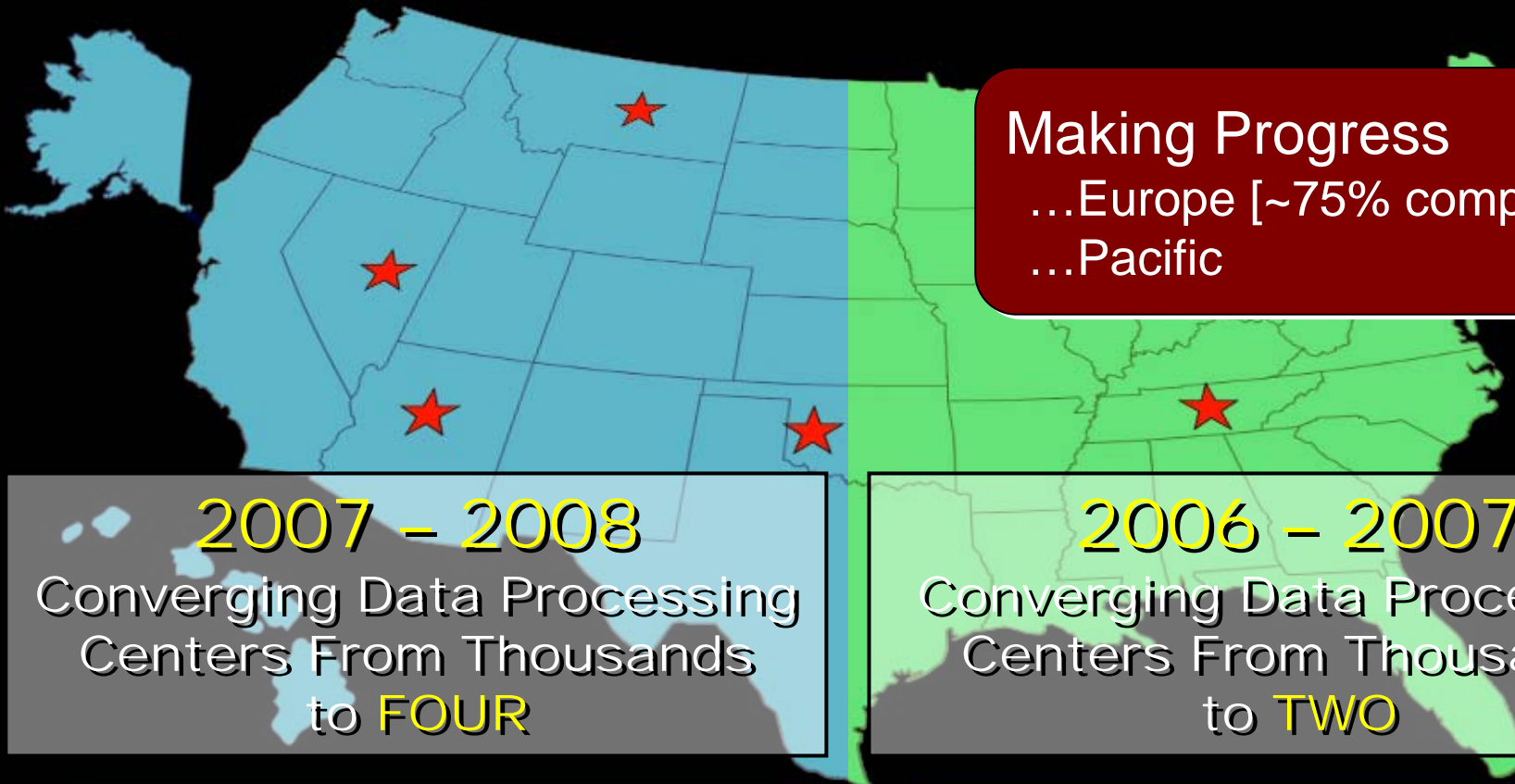


2006 - 2007
Converging Data Processing
Centers From Thousands
to **TWO**





Consolidating Data Bases



2007 - 2008

Converging Data Processing
Centers From Thousands
to **FOUR**

2006 - 2007

Converging Data Processing
Centers From Thousands
to **TWO**





Portfolio Management



1. Business Mission Area - DUSA

- Acquisition - ASA(ALT)
- Financial Management - ASA(FM&C)
- Human Resource Management - ASA(M&RA)
- Installations & Environment - ACSIM
- Civil works - ASA (CW)
- Logistics - ASA(ALT) ROS

2. Warfighting Mission Area - G-3/5/7

- Focused Logistics - G-4
- Battlespace Awareness - G-2
- Force Application - G-8
- Force Protection - G-8
- Net-Centric - CIO/G-6
- Force Management - G-3/5/7/FM
- Training - G-3/5/7/TR
- Command & Control - G/3/5/7/SB

Its about ownership and prioritization

- Identified, via funding process, all Army Information Technology related projects
- Delineated Domains and assigned owners

ProSight

Enterprise Investment Management

...reduce redundant stovepipe systems by 80% by 2007

3. Enterprise Information Environment Mission Area - CIO/G-6/GACKO

- Communications - AONS
- Computing Infrastructure - AONS
- Core Enterprise Services - GACKO
- Information Assurance - GACKO

4. Defense Intelligence Mission Area - G-2

- Domains TBD



Reducing redundant systems



Collaboration Best of Breed Competition



199
Requirements

CTSF

19
Products

Tool System Nomination

15 Dec 05 – 02 Feb 06

9
Products

CTSF Assessment

•21 Feb 06– 30 May 06

DISA selected DoD solution

Lotus. software



IBM Lotus Sametime 7.5

- Breeze 
- IDM-T/SharePoint 
- FusionNet 
- CIDNE

4
Products

Standard Solution
Identified

•VCSA announcement
released on 24 Jul 06



Army e-Learning Program



MOST POPULAR IT COURSES COMPLETED (as of 1 September 06)



of Courses
Completed

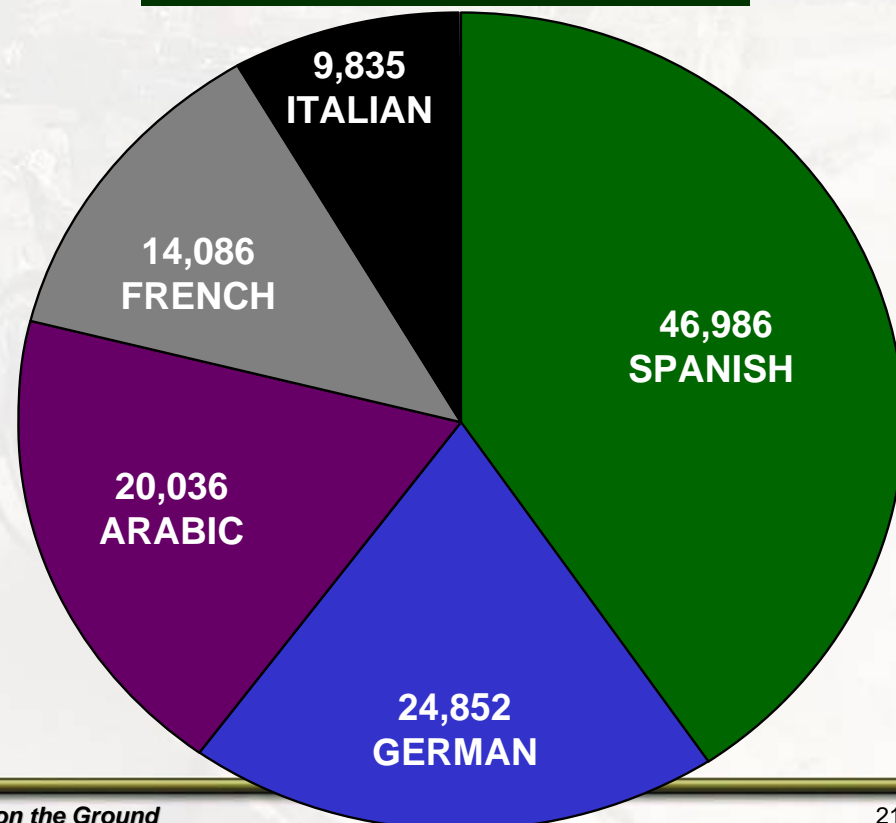
(Cumulative)

US Army Information Assurance Awareness	18,459
Windows XP: Fundamentals	6,378
Encryption Technologies	5,963
Operating Systems and TCP/IP	5,833
TCP/IP	5,612
Planning and Implementing an Active Directory Infrastructure	5,069
Firewalls and VPNs	4,954
IP Addressing and Routing	4,924
Microsoft Windows Server 2003: Network Infrastructure & Active Directory Physical Design	4,774

ROSETTA STONE



TOP FIVE LANGUAGES ACCESSED







Data at Rest, is Data at Risk!!!



➤ Currently...

- We have the policy in place
- We have some tools
 - ...PointSec 
 - ...Credant 
- But, no enterprise tools

- DoDD Policy 8500.2
 - <http://www.dtic.mil/whs/directives/corres>
- Army Regulation AR 25-2
 - <http://www.usapa.army.mil>
- Army Wireless Security Standards Better Business Practices (BBP) (Jun 2004)
- Army Road Warrior Laptop Security BBP (Feb 2006)
 - <https://informationassurance.us.army.mil/bbp>

➤ Get Ready, Here it comes - Guidance

- Working final guidance - due out soon!
- Meanwhile - Preliminary Guidance to get the ball rolling
 1. Immediately identify mobile “stuff”
 2. Categorize by “mobile” vs “non-mobile”
 3. Label appropriately
 4. Then - Don’t remove from secure area unless protected
 - PointSec
 - Credant
 - Microsoft Encrypting Files System (EFS)
 - Etc..



Where we've been and where we're going!!



Microsoft Enterprise License

Secure the
Operating
System

Active Directory

GSA
Smart Card

CAC/PKI Logins

Army @
89.4%

GSA
U.S. General Services Administration

Server 2003



Asset Discovery Tool

Encrypt E-mail

Encrypt data at rest

Consolidate APCs - - DISA mega centers

Thin-Client



Why You're Really Here!!!



- ✓ **Information Technology Enterprise Solutions - Services (ITES-2S) - Awarded 11 IDIQ Contracts 14 Apr 06 (currently under protest)**
 - ◆ \$20B over 9-years - provide Army Enterprise Infrastructure and Infostructure Services World-wide to support C4IM
- ✓ **Army Desktop & Mobile Computing – (ADMC-2) Awarded 9 IDIQ Contracts 24 Apr 06. Open for Ordering 1 October.**
 - ◆ \$5B over 10-years - desktops, notebooks, tablets, PDAs, printers, digital cameras, projectors & peripherals
- ✓ **Installation Modernization - Awarded 10 IDIQ Contracts 28 Apr 06**
 - ◆ \$4B contract for DOD wide installation-level information infrastructure
- ✓ **World-wide Satellite Systems ID/IQ Contract - Award 4rd Quarter FY06**
 - ◆ \$5B for SATCOM Services
- ✓ **ITES-Hardware – (ITES-2H) Award Projected for 1st Quarter FY2007**
 - ◆ \$5B over 5 years
 - ◆ Purchase or lease network environment products, including servers, workstations, Thin-Client Solutions, storage systems, networking & communications equipment, VTC solutions & more



Take Away's



- ④ Army IT must mirror the way we fight...JOINT
- ④ Army has a Clinger-Cohen CIO architecting, acquiring, configuration managing an ENTERPRISE
- ④ Croom's Law...Adapt (GOTS), Buy (COTS), Code
- ④ Design, operate, and defend from a NETOPS perspective
- ④ RESPONSIVE to urgent warfighter needs while integrating a STRATEGIC ENTERPRISE
- ④ Consider TOTAL COST OF OWNERSHIP to include SUSTAINMENT costs over the long term

QUESTIONS • THOUGHTS

15-SEP-06

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CALL TO DUTY: BOOTS ON THE GROUND

